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EXAMINER	
JOYNER, KEVIN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,662	MCVEY ET AL.	
	Examiner	Art Unit	
	KEVIN C. JOYNER	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) *11,14-16,18,23 and 27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12,13,17,19-22,24-26 and 28-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-10, 12, 13, 17 and 19-26 and 28-32 in the reply filed on July 23, 2009 is acknowledged. The traversal is on the ground(s) that Groups I and II can only be performed with the apparatus of claim 11, and, conversely, the apparatus can only be used to perform the method of claim 1, wherein the Examiner has purported to base the Restriction Requirement on the allegation that the claims do not distinguish patentably over the prior art of record. However, merely because two claims might be rejected in a future Office Action is not a basis for asserting that the claims are restrictable. This is not found persuasive because this Application is a National Stage entry of PCT/US05/09653 and is subject to PCT rules and regulations, most notably PCT 13.1 and 13.2 (See MPEP 1896 IV and 37 CFR 1.475). Under these guidelines, a group of inventions must relate to a single general inventive concept under PCT 13.1, because under PCT Rule 13.2, they must contain the same or corresponding special technical feature, wherein a special technical feature is defined as meaning those technical features that define over the prior art. As set forth on page 3 of the Office Action filed on June 23, 2009 McVey discloses this special technical feature in the International Publication No. WO 02/066082). Therefore, the single inventive concept cannot be considered a special technical feature because it does not make a contribution over the prior art.

2. The requirement is still deemed proper and is therefore made FINAL.

3. Claims 11, 14-16, 18, and 27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 23, 2009.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 5 recites the limitation "the deactivation agent" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested that the Applicant amend claim 5 to read, "the deactivation gas". Appropriate action is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Wasinger (U.S. Publication No. 2003/0143108).

Wasinger discloses a method of deactivating biological or chemical agents in a large volume space with a convoluted configuration that comprises an elongated space with multiple interconnected floors with a free flow of air between floors (concerning claim 21; Figure 1; paragraphs 15-19), the method comprising:

Isolating the space (paragraph 25);

Introducing a deactivation gas into a plurality of subregions of the isolated space, which subregions are physically interconnected (paragraph 22);

Circulating the deactivation gas within each subregion and from subregion to adjoining subregions (Figure 1); and,

Continuing to introduce and circulate the gas until any biological or chemical agents in the space are deactivated (See paragraphs 15-28).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-5, 7-10, 12, 13, 17, 21, 24 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVey (International Publication No. WO 02/066082) in view of Wasinger (U.S. Publication No. 2003/0143108).

McVey discloses a method of deactivating chemical or biological agents in a large volume space (page 1, lines 1-8), the method comprising:

Introducing a deactivation gas into the space (page 11, lines 33-37; page 12, lines 1-10);

Circulating the deactivation gas within the space; and

Continuing to introduce and circulate the deactivation gas until any biological or chemical agents in the space are deactivated (page 14, lines 9-16). Although McVey discloses that the space is a sealed enclosure or a large volume space such as a building (page 5, lines 20-25; page 11, lines 24-33), McVey does not appear to disclose isolating the space, or introducing the gas into a plurality of subregions, wherein a plurality of subregions are interconnected; and circulating the gas within each subregion and from adjoining subregions until any biological or chemical agents are deactivated. However, it is conventionally well known that an enclosed region such as a building comprises a convoluted configuration with adjoining interconnected subregions.

Wasinger discloses a method of deactivating biological or chemical agents in a large volume space with a convoluted configuration that comprises an elongated space with multiple interconnected floors with a free flow of air between floors (concerning claim 21; Figure 1; paragraphs 15-19), the method comprising:

Isolating the space (paragraph 25);

Introducing a deactivation gas into a plurality of subregions of the isolated space, which subregions are physically interconnected (paragraph 22);

Circulating the deactivation gas within each subregion and from subregion to adjoining subregions (Figure 1); and,

Continuing to introduce and circulate the gas until any biological or chemical agents in the space are deactivated (See paragraphs 15-28). Wasinger discloses that such a method is provided in order to produce a controlled atmosphere for the building (i.e. for isolation) and to actively and effectively decontaminate an entire building with a convoluted configuration (i.e. one with a plurality of subregions that are physically interconnected) against chemical and biological agents. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to isolate the building of McVey, wherein such a building is comprised of a convoluted configuration, in a manner such that the gas is circulated from subregion to adjoining subregion in order to provide a controlled atmosphere for the building and effectively and actively decontaminate the entire contents of convoluted configuration against chemical and/or biological agents as exemplified by Wasinger.

Concerning claim 2, McVey continues to disclose exhausting air, spent deactivation gas, and deactivation gas from the space and trapping any entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas (page 14, lines 15-38; page 15, lines 1-7). With regard to claim 3, the reference also discloses sensing a concentration of the deactivation gas at a plurality of points around the space, and controlling the introduction and circulation of the deactivation gas and exhausting such that the deactivation gas concentration throughout the space is maintained above a preselected minimum concentration and

below a preselected maximum concentration (page 15, lines 15-37; page 16, lines 1-23). Concerning claim 4, McVey also discloses sensing temperature at a plurality of locations around the space, wherein the preselected maximum concentration is a saturation or condensation concentration at the sensed temperature (page 8, lines 1-10; page 15, lines 15-37). Concerning claim 5, the reference also discloses that controlling the introduction and circulation of the deactivation agent includes flow dynamics modeling (page 15, lines 30-37; page 16, lines 1-20). With regard to claim 7, McVey continues to disclose that the deactivation gas includes hydrogen peroxide vapor (page 14, lines 5-11).

Regarding claim 8, McVey also discloses vaporizing a liquid deactivation concentrate to generate the deactivation gas during introduction of said gas (page 6, lines 20-35). Concerning claim 9, the reference also discloses that the vaporizing step is performed within HVAC systems for heating and cooling the space (page 6, line 1). With regard to claim 10, McVey discloses a step of exhausting to bring the space at a negative pressure before introducing the deactivation gas (page 5, lines 20-35).

Concerning claim 12, McVey continues to disclose that the method further includes;

With a plurality of sensors, sensing a concentration of the deactivation gas at a plurality of points around the space (page 15, lines 20-37; page 14, lines 9-20; page 16, lines 1-30). Regarding claims 13 and 17, the limitations are met with respect to claims 4 and 9 above. Therefore, the explanation is relied upon as set forth above as well. Concerning claims 19 and 24, the method of McVey also discloses employing a plurality

of exhaust fans for exhausting the air, spent deactivation gas, and deactivation gas at a plurality of locations within the space and controlling the exhaust fans to control flow of the deactivation gas along and around the space in a manner to maintain a concentration of the deactivation gas between a minimum preselected and maximum preselected concentration throughout said space (page 11, lines 23-37).

Regarding claim 29, the reference also discloses using a computer routine for monitoring each of a plurality of deactivation gas concentration sensors around the space and controlling deactivation gas generators, exhaust fans for drawing deactivation gas out of the space, and a circulation means of the deactivation gas around the space in accordance with the sensed deactivation gas concentrations (page 11, lines 20-37). Concerning claim 30, McVey continues to disclose that portals into the space are closed to seal the space from the surrounding environment based on the computer routine (page 11, lines 22-37). Concerning claim 31, McVey in view of Wasinger also discloses a computer control system for controlling deactivation of biological and chemical agents in a large volume space with a convoluted configuration, wherein the computer control system includes a processor which is programmed to perform the method of claim 1 as set forth above with respect to claims 1 and 12. Thus, the limitations of claim 31 are met by McVey in view of Wasinger.

With regard to claim 32, McVey also discloses that the step of introducing a deactivation gas into the space includes connecting a source of deactivation gas with an HVAC system for heating and cooling the space and introducing the gas into ducts of the HVAC system; and

The step of circulating the deactivation gas within the spaces includes using the HVAC system to circulate the deactivation gas (page 5, lines 21-37; page 6, lines 1-37; page 7, lines 1-25). However, as set forth above with respect to claim 1, McVey does not appear to disclose that the space includes a plurality of subregions, wherein the HVAC system is utilized to circulate the deactivation gas within each subregion and from subregion to the adjoining subregions. However, Wasinger discloses that the space includes a plurality of subregions, wherein the deactivation gas is circulated within each subregion and to adjoining subregions (Figure 1). Furthermore, Wasinger discloses that the deactivation gas is introduced to the plurality of subregions and circulated within each subregion and from subregion to the adjoining subregions by an HVAC system for heating and cooling a building in order to uniformly distribute said deactivation gas to each subregion (paragraphs 22-24). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the method of McVey to introduce and circulate the deactivation gas to a large volume space with a convoluted configuration comprising physically interconnected subregions in a manner that the gas is circulated from each subregion to a plurality of subregions in order to effectively and actively decontaminate the entire contents of a convoluted configuration against chemical and/or biological agents, wherein the HVAC system is utilized for introduction and circulation of said gas to said subregions in order to uniformly distribute said deactivation gas to each subregion as exemplified by Wasinger.

11. Claims 6, 25, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVey (International Publication No. WO 02/066082) in view of Wasinger (U.S. Publication No. 2003/0143108) as applied to claims 3 and 12 above, and further in view of Samuel et al. (U.S. Patent No. 5,399,314).

Concerning claim 26, McVey is relied upon as set forth above. McVey does not appear to disclose that the sensing step includes passing the decontamination gas over a coating on at least one surface of a piezoelectric resonator having a characteristic resonance frequency, which coating interacts with the deactivation gas and changes the resonance frequency of the resonator in accordance with a concentration of the deactivation gas, and determining the concentration of the deactivation gas from the changed resonance frequency. Samuel discloses a method of deactivating agents in a space by introducing a deactivating gas to the space and sensing a concentration of the deactivation gas with a sensing means (column 1, lines 10-22; column 2, lines 56-68). The reference continues to disclose that the sensing step includes passing the decontamination gas over a coating on at least one surface of a piezoelectric resonator having a characteristic resonance frequency (column 10, lines 10-50), which coating interacts with the deactivation gas and changes the resonance frequency of the resonator in accordance with a concentration of the deactivation gas (column 3, lines 37-62; column 4, lines 4-15), and determining the concentration of the deactivation gas from the changed resonance frequency (column 3, lines 5-35) in order to eliminate the supply of excessive deactivating vapor concentrations to the space (column 3, lines 36-47). As such, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the sensing step of McVey to utilize a step that includes passing the decontamination gas over a coating on at least one surface of a piezoelectric resonator having a characteristic resonance frequency, which coating interacts with the deactivation gas and changes the resonance frequency of the resonator in accordance with a concentration of the deactivation gas, and determining the concentration of the deactivation gas from the changed resonance frequency in order to eliminate the supply of excessive deactivating vapor concentrations to the space as exemplified by Samuel. With regard to claims 6, 25, and 28, the limitations are met by McVey in view of Samuel as set forth above (as properties of an electrical element are altered in accordance with the concentration of the deactivation gas as well; column 9, lines 40-60). Therefore, the explanation is relied upon as necessary. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the sensing step of McVey to utilize a step that includes passing the decontamination gas over a coating on at least one surface of a piezoelectric resonator having a characteristic resonance frequency, which coating interacts with the deactivation gas and changes the resonance frequency of the resonator (as well as the electrical properties of an electrical element) in accordance with a concentration of the deactivation gas, and determining the concentration of the deactivation gas from the changed resonance frequency in order to eliminate the supply of excessive deactivating vapor concentrations to the space as exemplified by Samuel.

12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over McVey (International Publication No. WO 02/066082) in view of Wasinger (U.S. Publication No. 2003/0143108) as applied to claims 1 above, and further in view of McGady et al. (U.S. Patent No. 4,067,691).

McVey in view of Wasinger is relied upon as set forth above. McVey in view of Wasinger does not appear to disclose automatically closing doors to isolate the space from the environment before introducing the deactivation gas. McGady discloses a method of deactivating chemical and biological agents in a large volume space by isolating said space and introducing a deactivating agent into said space (column 2, lines 20-45). McGady continues to disclose that the isolating step includes automatically closing doors to isolate the space from the environment before introducing the deactivating agent (column 3, lines 25-50) in order to isolate a contaminated area with contaminated items during the sterilization process. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of McVey in view of Wasinger to include automatically closing doors in said method in order to isolate a contaminated area with contaminated items from the environment during the sterilization process as exemplified by McGady.

13. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVey (International Publication No. WO 02/066082) in view of Wasinger (U.S. Publication No. 2003/0143108) as applied to claims 3 and 12 above, and further in view of Sulakvelidze et al. (U.S. Patent No. 6,699,701).

McVey in view of Wasinger is relied upon above, wherein both McVey and Wasinger discloses a method of deactivating a chemical or biological agent in a large volume space by the introduction of a deactivation gas with a dispersing mechanism (HVAC system). However, the references do not appear to disclose that the large space is an airport concourse. Sulakvelidze discloses a method of deactivating a chemical or biological agent in a large volume space by the introduction of a deactivation gas with a dispersing mechanism (column 10, lines 35-65). The reference continues to disclose a plurality of large spaces that are conventionally well known that become decontaminated with a biological or chemical agent including theaters, concert halls, train stations and airports (column 24, lines 1-10). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the decontaminating method of McVey in a large space such as an airport, as airports are conventionally well known areas in need for decontamination as exemplified by Sulakvelidze. Concerning claim 23, as noted by the Applicant in the reply filed on July 23, 2009, claim 23 is generic to claim 22 wherein airport concourses include a wing of a building with corridors, individual offices or rooms, cubicles or laboratories. As such, the limitations are met with respect to Sulakvelidze as well.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent

and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1-5, 7-10, 12, 13, 17, 21, 24 and 29-32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 7,361,304 in view of McVey (International Publication No. WO 02/066082) and Wasinger (U.S. Publication No. 2003/0143108).

. Regarding claim 1, all of the limitations of the instant application are met with respect to '304 except for deactivating agents in a large volume space with a convoluted configuration by isolating the space and circulating a gas within each subregion and from adjoining subregions. However, as set forth above, McVey in view of Wasinger discloses this limitation in order to produce a controlled atmosphere for the building (i.e. for isolation) and to actively and effectively decontaminate an entire building with a convoluted configuration (i.e. one with a plurality of subregions that are physically interconnected) against chemical and biological agents. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to isolate the building of '304, wherein such a building is comprised of a convoluted configuration, in a manner such that the gas is circulated from subregion to adjoining subregion in order to provide a controlled atmosphere for the building and effectively and actively decontaminate the entire contents of a convoluted configuration against chemical and/or biological agents as exemplified by McVey in view of Wasinger.

Regarding claim 2, '304 does not appear to disclose exhausting air, spent deactivation gas, and deactivation gas from the space and trapping any entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas. However, McVey continues to disclose exhausting air, spent deactivation gas, and deactivation gas from the space and trapping any entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas in order to remove the deactivation gas upon duration of the decontaminating step (page 14, lines 15-38; page 15, lines 1-7). Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to exhaust air, spent deactivation gas, and deactivation gas from the space and trap any entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas in order to remove the deactivation gas upon duration of the decontaminating step as exemplified by McVey.

With regard to claim 3, '304 does not appear to disclose sensing a concentration of the deactivation gas at a plurality of points around the space, and controlling the introduction and circulation of the deactivation gas and exhausting such that the deactivation gas concentration throughout the space is maintained above a preselected minimum concentration and below a preselected maximum concentration. Nonetheless, McVey continues to disclose sensing a concentration of the deactivation gas at a plurality of points around the space, and controlling the introduction and circulation of the deactivation gas and exhausting such that the deactivation gas concentration throughout the space is maintained above a preselected minimum concentration and below a preselected maximum concentration in order to control the concentration of the deactivation gas in the space and eliminate unnecessary deactivation gas introduction (page 15, lines 15-37; page 16, lines 1-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to sense a concentration of the deactivation gas at a plurality of points around the space, and control the introduction and circulation of the deactivation gas and exhausting such that the deactivation gas concentration throughout the space is maintained above a preselected minimum concentration and below a preselected

maximum concentration in order to control the concentration of the deactivation gas in the space and eliminate unnecessary deactivation gas introduction as exemplified by McVey.

Concerning claim 4, '304 does not appear to disclose sensing temperature at a plurality of locations around the space, wherein the preselected maximum concentration is a saturation or condensation concentration at the sensed temperature. However, McVey also discloses sensing temperature at a plurality of locations around the space, wherein the preselected maximum concentration is a saturation or condensation concentration at the sensed temperature in order to control the concentration of the deactivation gas in the space and eliminate unnecessary deactivation gas introduction (page 8, lines 1-10; page 15, lines 15-37). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to include sensing temperature at a plurality of locations around the space, wherein the preselected maximum concentration is a saturation or condensation concentration at the sensed temperature in order to control the concentration of the deactivation gas in the space and eliminate unnecessary deactivation gas introduction as exemplified by McVey.

Concerning claim 5, '304 does not appear to disclose that controlling the introduction and circulation of the deactivation agent includes flow dynamics modeling. However, McVey continues to disclose that controlling the introduction and circulation of the deactivation agent includes flow dynamics modeling for the purposes of controlling the concentration of the deactivation gas in the space and eliminating unnecessary deactivation gas introduction (page 15, lines 30-37; page 16, lines 1-20). As such, it

would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to include controlling the introduction and circulation of the deactivation agent utilizing flow dynamics modeling for the purposes of controlling the concentration of the deactivation gas in the space and eliminating unnecessary deactivation gas introduction. With regard to claim 7-9, '304 meets these limitations as set forth in claims 1-18.

With regard to claim 10, '304 does not appear to disclose a step of exhausting to bring the space at a negative pressure before introducing the deactivation gas. However, McVey discloses a step of exhausting to bring the space at a negative pressure before introducing the deactivation gas in order to expedite the deactivation of the biological or chemical agents (page 5, lines 20-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to include a step of exhausting to bring the space at a negative pressure before introducing the deactivation gas in order to expedite the deactivation of the biological or chemical agents as exemplified by McVey.

Regarding claims 13 and 17, the limitations are met with respect to claims 4 and 9 above. Therefore, the explanation is relied upon as set forth above as well. Concerning claims 19 and 24, '304 does not appear to disclose employing a plurality of exhaust fans for exhausting the air, spent deactivation gas, and deactivation gas at a plurality of locations within the space. Nonetheless the method of McVey also discloses employing a plurality of exhaust fans for exhausting the air, spent deactivation gas, and deactivation gas at a plurality of locations within the space in order to control flow of the

deactivation gas along and around the space in a manner to maintain a concentration of the deactivation gas between a minimum preselected and maximum preselected concentration throughout said space (page 11, lines 23-37). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to include a step of employing a plurality of exhaust fans for exhausting the air, spent deactivation gas, and deactivation gas at a plurality of locations within the space in order to control flow of the deactivation gas along and around the space in a manner to maintain a concentration of the deactivation gas between a minimum preselected and maximum preselected concentration throughout said space as exemplified by McVey.

Regarding claims 12, 29 and 31, '304 does not appear to disclose using a computer routine for monitoring each of a plurality of deactivation gas concentration sensors around the space and controlling deactivation gas generators, exhaust fans for drawing deactivation gas out of the space, and a circulation means of the deactivation gas around the space in accordance with the sensed deactivation gas concentrations. Nonetheless, McVey also discloses using a computer routine for monitoring each of a plurality of deactivation gas concentration sensors around the space and controlling deactivation gas generators, exhaust fans for drawing deactivation gas out of the space, and a circulation means of the deactivation gas around the space in accordance with the sensed deactivation gas concentrations in order to control the concentration of the deactivation gas in the space and eliminate unnecessary deactivation gas introduction (page 11, lines 20-37). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to include using a computer routine for

monitoring each of a plurality of deactivation gas concentration sensors around the space and controlling deactivation gas generators, exhaust fans for drawing deactivation gas out of the space, and a circulation means of the deactivation gas around the space in accordance with the sensed deactivation gas concentrations in order to control the concentration of the deactivation gas in the space and eliminate unnecessary deactivation gas introduction as exemplified by McVey.

Concerning claim 30, '304 does not appear to disclose that portals into the space are closed to seal the space from the surrounding environment based on the computer routine. However, McVey discloses that portals into the space are closed to seal the space from the surrounding environment based on the computer routine in order to control the deactivation gas into and out of the large volume space (page 11, lines 22-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify '304 to include closing portals into the space to seal the space from the surrounding environment based on the computer routine in order to control the deactivation gas into and out of the large volume space as exemplified by McVey. Concerning claim 32, the limitations are met with respect to claims 1-18 of '304.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN C. JOYNER whose telephone number is (571)272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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KCJ

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